

REMARKS

By this amendment, claims 1-11 and 14-15 are pending. No new matter is introduced.

The final Office Action mailed July 2, 2003 rejected claims 1-11 and 14-15 as obvious under 35 U.S.C. § 103 based on *Zollinger et al.* (US 5,999,947). The rejection of claims 1-11 and 14-15 is respectfully traversed because *Zollinger et al.* does not teach or otherwise suggest the features of claims 1-11 and 14-15.

Dependent claims 14 and 15

Dependent claim 14 recites:

wherein the first copy of the table and the second copy of the table have said at least one non-overlapping relational database column **after said updating**

Dependent claim 15 recites:

wherein the first copy of the data container and the second copy of the data container have said at least one non-overlapping data field **after said updating**

The antecedent basis for “said updating” in dependent claims 14-15 is “updating the second copy . . . at the second site based on the transmitted changes.” Claims 14-15 require that the first and second copies have at least one non-overlapping column or data field after updating the second copy. *Zollinger et al.* does not teach this feature, and in fact teaches against it, because it discloses a system in which server and client tables must be the same, including the same column shape, after every update. Specifically, with respect to adding a column, *Zollinger et al.* discloses that adding an entire column is considered a major structural change to a table (col. 11:14-17). Accordingly, when a column is added to a server table in *Zollinger et al.*, the table is copied down to the client:

Next, the current table **20** is copied to the reference table **28** at step **90** without any differencing being made. Finally, all previous updates will no longer be necessary

since every update to this newest version level will require that the table be copied to the client in its entirety. Therefore, at step **92**, *all previous updates will be erased* in order to release system resources. The effect of a major revision when receiving a request for an update is that the reference table **28** will be directly copied to the client regardless of the current version of the table on the client. (col. 11:40-50, emphasis added)

This copying results in the server and client tables having identical columns. This is true even for the non-enabled alternative of “storing an update” to add the column at the client rather than copying the entire table down to the client. (Col. 11:26-29) As a result, *Zollinger et al.* fails to teach or suggest “at least one non-overlapping relational database column” or “field **after said updating.**”(Claims 14-15) In fact, “since every update to [the] newest version level will require that the table be copied to the client in its entirety . . . all previous updates will be erased,” (Col. 11: 43-47) and updates are allowed to resume only after the client table has a copy of the server table.

The Office Action, states on page 9 that “figures 2A and 2D show the differences after update from the addition of a new column in figure 2D (non-overlapping columns between tables).” However, Figures 2A and 2D merely show the difference between two versions of a server table (col. 9:15-18), not between a first copy at a first site and a second copy at a second site. With respect to the client copy, *Zollinger et al.* discloses that “the current table **20** (FIG. 2B) is copied to the reference table **28** (now also FIG. 2B)” (Col. 10: 60-62), showing that the client copy is always the same as the server copy after an update. As a result, *Zollinger et al.* does not teach that its server copy and client copy have “at least one non-overlapping relational database column” or “data field after updating.”

Independent claims 1 and 11

Independent claim 1 recites:

transmitting changes to the first copy of the table from the first site to the second site; and
updating the second copy of the table at the second site based on the transmitted changes;
wherein the first copy of the table and the second copy of the table have at least one **non-overlapping relational database column**

As argued above, *Zollinger et al.* discloses a system in which the client and server table are identical copies after every update. On page 10, however, the Office Action states that “*Zollinger et al.* discloses adding a column in a table, changing the structure of the table, in other words, a new column is being inserted into the table without overlapping other columns,” apparently construing the recited “changes” to be the insertion of a new column, such as the title column in FIG. 2D. (Col. 11:15-18) If “the changes to the first copy” is construed to read on adding a new column (title) to the server table, then the first copy of the table is the server table before the column is added (otherwise there is no “change”) and therefore does not include the new column. As a result, *Zollinger et al.* does not disclose “wherein the first copy of the table and the second copy of the table have at least one non-overlapping relational database column,” because the first copy and the second copy both lack the new column before the change, and there exists no “non-overlapping relational database column” or “data field” as recited by claims 1 and 11 respectively.

Similarly, independent claim 11 is also nonobvious over *Zollinger et al.* because, prior to insertion of the column Title in FIG. 2D (“the change to the first copy”), the first copy and the second copy did not have at least one non-overlapping data field; they were identical. Even if the data field is broadly construed to be the inserting a new row with Mr. Mauss as suggested in the

Office Action on page 10, the new row is the change, and the server table does not yet contain the Mr. Mauss row and is identical to the client copy.

Independent claim 9

Independent claim 9 recites:

- (d) dropping the first column and adding the second column to the table at the second site;
- (e) defining the second flavor for the first site and dropping the first column from the table at the first site; and
- (f) **maintaining replication activities while performing steps (a), (b), (c), (d), and (e)**

The Office Action, on page 11, states that “*Zollinger* discloses changing the state of a database, such as additions, deletions, or modifications of records. When synchronizing between database tables it is not limited to only delete rows; wherein if columns can be added into a table to synchronize with the current table; a deletion (dropping) of columns can also be done.” However, *Zollinger et al.* teaches against this dropping a column or other major structure change while “maintaining replication activities” as recited in claim 9. *Zollinger et al.* states that when a new column is added, “the current table is copied to the reference table,” and then “all previous updates will no longer be necessary.” (Col. 11:41-44) Therefore “**all previous updates will be erased** in order to release system resources.” (Col. 10:44-46) Replication activities are not maintained and in fact are erased when adding in a column in *Zollinger et al.* While Figures 2A and 2B, cited in the Office Action, show the differences from the deletion of the Presley row after updating, these are row changes not column changes. No column is added or changed between Figures 2A and 2B.

Dependent claims 7 and 10

Claim 7 recites “wherein the step of updating the second copy of the table at the second site based on the transmitted changes **includes** the step of **updating overlapping columns** between the first flavor and the second flavor in the second copy of the table.” Claim 10 recites “**updating the second copy** of the table at the second site **based on overlapping columns** between the first flavor and the second flavor.”

The Office Action, on page 5, states that *Zollinger et al.* “teaches supersets or collections (including second flavor) of the updates of the database tables on the differences of two separate database tables” citing column 6, lines 3-40. This rejection is inconsistent with the rejection of claims 1 and 11. The Office Action, on page 10, implies that adding a column to a database table is read on by “changes to the first copy of the table.” If this is true, though, the change includes the new column, and therefore, *Zollinger et al.* does not teach that updating “based on the transmitted changes” includes updating **overlapping columns**.

Dependent claims 2-6, 8, and 10 are also allowable for at least the same reasons as their independent claims and are separately patentable on their own merits.

Therefore, the present application, as amended, overcomes the objections and rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any unresolved issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at 703-425-8516 so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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